

# **RAB Minutes**

## **NAS North Island**

### **Restoration Advisory Board**

#### ***Introduction***

The fifty-fourth Restoration Advisory Board (RAB) meeting for Naval Air Station (NAS) North Island/ Naval Amphibious Base (NAB) Coronado was held on Wednesday, March 31, 1999, at the Coronado Public Library from 6:30 p.m. to 8:50 p.m.

Ms. Carla Fargo, Community Co-Chair, called the meeting to order at 6:35 p.m. and welcomed RAB members and the public. As a result of the many new individuals, attendees were asked to introduce themselves, for the record.

#### ***RAB Attendance***

John Locke, Richard Mach, Bill Collins, Laura Hunter, Art Van Rooy, Foster Marshall, Carla Fargo, Sandor Kaupp, Greg Walker, Alan Clark, LaConta Coleman

#### ***Public/Navy Attendance***

Bob Tait, Rafat Abbasi, Charles Cheng, Chris Gomez, Jennifer Rich, Kathryn Parker, Tracy Mogg, Scott Haley, Bill LaFleur, Jill Votaw, Robin Mach, Stephanie Kaupp, Ken Mitchell, Jim French, Merry Coons, Mark Bonsavage, Marilyn Field, Mary Masters, Mona Wils on, Debbie Wankier, Nancy Lee

#### ***Approval of February 19, 1999 Meeting Minutes***

Ms. Rich had a suggestion for change to the February 19, 1999 minutes, clarifying that under the Site 9 update in the third paragraph, it should read Department of Toxic Substances Control (DTSC). Ms. Rich also suggested that the first paragraph should read 1999, not 1998. The February 1999 minutes were approved with those changes.

Ms. Hunter suggested that the meeting minutes sent via email have the text written in the e-mail vice as an attachment. Mr. Mach stated that everyone would receive the minutes as a mailer, and members who provide their e-mail address to Ms. Wankier will also receive the minutes as an email attachment (MS Word file format) and a text message within the email, a couple of days earlier.

#### ***Meeting Topic—Site 9***

The March 1999 meeting topic was Site 9 because of its complexity and current site activity. The purpose of the meeting was to help bring everyone up to speed on the background of Site 9.

## ***Presentations***

### **Background of Site 9—Bob Tait, Bechtel National, Inc., CLEAN Program**

There have been numerous studies and investigations performed on all 10 areas located on Site 9. The investigation got underway with some geophysical and soil gas surveys. Record searches indicated that various disposal practices had taken place—liquids had been dumped directly onto the ground; there was crash and rescue fire training; and pictures showed drums on the site, etc. The findings: Area 2 has no evidence of disposal; Areas 4, 5, 6, 7 (due to a recent remediation project), 9, and 10 have minimal risk assessed; and Areas 1, 3, and 8 are contaminated and pose a risk to human health and the ecology.

Mr. Tait addressed the topic of the NAS North Island Installation Restoration Program at Site 9—Chemical Waste Disposal Area. Bechtel National, Inc. assists the Navy with many items, and sometimes remedial design, but not remediation. Bechtel's focus is primarily investigations, pilot testing, and things of that nature. He explained that removal actions, remedial investigations and a feasibility studies are taking place. He estimated that a remedy selection, remedial design, and remedial action would take place within the next couple of years. Mr. Tait discussed in great detail the process and analysis that will determine the next steps for the cleanup of Site 9. This discussion was based on the Installation Restoration Program at Site 9.

Mr. Tait discussed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process, in general, to clarify where they're at in the process and how they got there. Typically, their approach is to accept that something is wrong, then determine its risk to human health and the environment.

He stated that in 1983-1985, the Navy started the CERCLA process and performed a Preliminary Assessment/Site Inspection (PA/SI) on Site 9, determining the nature of contamination and imminent risk. During 1988-1999, Remedial Investigations (RI) were performed at all Site 9 areas. With that information, Removal Actions were implemented in 1996-1999. Feasibility Studies (FS), evaluating cleanup alternatives started in 1995 and are ongoing. Remedial Selection and Remedial Design/Remedial Action (RD/RA) are targeted for the year 2000 and beyond.

Mr. Tait discussed the very large and comprehensive RI report that was completed by Jacobs Engineering Group, Inc. Records were examined, people were interviewed, aerial and ground photographs were inspected, and all data was considered and reviewed. The geophysical and soil gas survey results indicated that various disposal practices had taken place. The geophysical survey detected certain types of chemical contamination, while the soil gas survey provided a good tool for locating volatile solvents.

The geology of Site 9 is typical of a coastline and river mouth. It consists of very fine silt and clay layers that appear to prevent water and solvent movement downward. The groundwater underneath NAS North Island is basically seawater. The freshwater lens beneath the site doesn't reach the edge of the bay, and it grades into complete seawater at about 50 or 60 feet below the surface. Since the water is not usable for drinking or irrigation, the Regional Water Quality Control Board has designated it as non-beneficial.

Soil investigations determined that Areas 1b, 1c, 3, and 8 were contaminated with Volatile organic compounds (VOCs) and Areas 1b and 1c also contained polychlorinated biphenyls (PCBs). Metals were found in most of the areas above background levels, but not substantially high. Radiological surveys indicated that low-level radioactive material had been stored on the site at Area 7. Area 1, the main disposal area—also referred to as the fiery marsh, was the site where liquids were dumped indiscriminately. Some of these chemical liquids were incompatible which caused them to

spontaneously combust. The fiery marsh—Area 1, sits at the intersection of two geologic faults. Area 3 was discovered through soil gas surveys. There had been no previous records of contamination, but the survey results indicated very high soil gas survey readings. Area 8 had four trenches where various liquid chemicals were segregated to eliminate the spontaneous fires at Area 1. The investigation in this area also detected very high soil gas readings.

Two problems were found in the groundwater in Areas 1 and 8. Both a shallow ground water plume and a light non-aqueous phase liquids (LNAPL) plume were discovered, primarily in Areas 1 and 8. This was not a big surprise as this was where most of the liquids were dumped. The Area 3 groundwater contamination was detected only in the shallow groundwater. As a result of the quantity of materials that had been disposed at the site, it was decided to investigate a problem that is referred to as dense non-aqueous phase liquids (DNAPL), or sinkers. Some of these solvents, if put into water, will not dissolve in it. It sinks right through the water and causes real problems.

As a result of the geophysical study—a seismic study confirmed that contaminated material went down into the faults. The results determined that a significant amount went down the faults, and it may be quite deep. In the deeper groundwater, the sinkers went down in the area of the fiery marsh to a depth of about 85 feet. Some drilling was done and it was found that some of these DNAPL chemicals had reached the coastline.

Mr. Tait explained that the first RI addendum focused mainly on the shoreline of the bay. A number of monitoring wells were installed in order to determine if contaminants were getting into the bay. It was later determined that in the two center clusters of wells, the two deepest wells that ran from about 60-85 feet, were contaminated. Studies were undertaken to determine where this material was getting into the bay. The first thing done was a passive soil vapor survey, which indicates groundwater plumes qualitatively. Porewater was later sampled at the bottom of the bay where the first survey had indicated contamination. Water was sampled and some special equipment was constructed to measure quantitatively what kind of loading was put on the bay with these chemicals. The passive soil gas suggests that there were two areas where chemicals might be coming out from the bottom of the bay.

Mr. Tait provided an update on what's been happening recently, and some of the information that was uncovered. He discussed, in detail, the soil areas of concern, and the VOCs, semi-VOCs, PCBs, and metals located in the various locations on the site. He provided and explained in detail the well results from surveys and their findings.

Recently, an additional set of wells were installed and it was determined that the wells had contamination. Two of those wells might be contributing to the discharge into the bay. These wells were plugged and new wells put in. Consistent and regular monitoring of the wells is continuing.

**Presenting the Regulators Perspective —Rafat Abassi, Department of Toxic Substances Control Comments**

The DTSC's objective is to meet with the Navy to resolve outstanding issues on an on-going basis. Mr. Abassi provided a history profile of Site 9, and indicated the DTSC's concern about the quantity of discharge, and the location of the discharge. The Navy is currently working on a feasibility study, which is scheduled for completion in the fall of 2000. They have also had a removal action in place for the past two years, which the DTSC determined has been very successful. He mentioned that the Navy will conduct a remedial action plan and will propose a final remedy for the site. There will be a 30-day public comment period allowing the public to become involved. The DTSC would like to see the Navy conduct some treatability tests to help in the finalization of the feasibility study. Their milestones are to assess the risks to human health and the ecology; refine the migration pathways (which are most important in terms of designing

the remedy); evaluate how the residual contamination will be handled after the on going removal action is completed; review the 2d/3d seismic survey data to reconcile the geologic stratigraphy; and to evaluate that the reinjection alternative will not enhance migration to the bay.

Mr. Abassi's opinion is that the treatability study is an integral part of the feasibility study. The treatability study would provide some very critical information in terms of performance, as well as cost data, preliminary design date, and time associated with cleanup.

Mr. Abassi stated that the Navy needs to address some critical items for the future use of the site. The Navy has used the industrial scenario in the risk assessment, but if it's transferred to the public, a residential cleanup scenario should be used. A revised risk assessment needs to incorporate all information so that it's representative. When the Navy did the ecological risk assessment and the RI, they used the least tern and burrowing owl as the representative species. When Mr. Abassi reviewed the FS, the representative species were changed to a mouse and rat. That is a large inconsistency between the risk assessment conducted in the RI and the FS. There is qualitative and quantitative evidence to suggest that there is a discharge to the bay. The discharge is in a limited area and the Navy should submit a proposal to determine what kind of risk is evidenced from the discharge into the bay. Finally, Mr. Abassi would like to see some clean up levels based on the most representative human and ecological risk assessment.

**Presenting the Regulators Perspective—Charles Cheng, Regional Water Quality Control Board Comments**

The focus of Mr. Cheng's presentation was water quality. The two major categories discussed were policy issues and how the policies are applied to Site 9. The RWQCB's major authorities are the California Water Code, Division 7 and the Porter-Cologne Water Quality Control Act. These laws provide the RWQCB the following guidance: *Regulation of Activities or Factors to Maintain the Highest Water Quality*, and the *Achieving the Highest Water Quality for the State—which is reasonable*. He provided examples of establishing water quality objectives and its beneficial uses. Mr. Cheng suggested that in groundwater cleanup levels, the first consideration is the highest quality that is reasonable. At the minimum, protect the beneficial uses established by the Basin Plan. The economic and technology feasibilities must be a consideration of cleanup levels. With respect to technical issues, the Navy is to provide a time frame for the cleanup as well as setting the target levels. If the Navy finds something is high in concentration, then it is encouraged that the Navy do interim cleanup or removal actions.

The final category will be assessment of waste and waste discharges. The report has not addressed the total petroleum hydrocarbons and its additives like benzotoluene, benzene, polynuclear hydrocarbons, and methyl tertiary butyl ether (MTBE). The baseline assessment in the document was Mr. Cheng's final point. Existing shoreline wells should be used as a compliance point, and use the water quality objectives in order to evaluate what level of clean up is needed.

**Soil Vapor Extraction (SVE) Remediation Technology—Richard Mach, Southwest Division, Naval Facilities Engineering Command**

Mr. Mach discussed the removal-action, taking place at Site 9. The Navy started with the SVE system for removing contaminants that were found in the soil. Due to high levels of contamination persisting in the SVE air stream after 2 years of operation, additional investigation of the area began. A pool of floating product (LNAPL) consisting of mainly petroleum products has been located within the removal area. The LNAPL also has high levels of chlorinated solvents mixed in with the petroleum. The Navy is in the process of combining this new information to conduct a steam injection enhancement pilot test. The pilot test will consist of steam injection into the soil, LNAPL, and groundwater coupled with soil vapor extraction and LNAPL removal. Testing is

expected to begin within the next 15-30 days. Wells will be installed in the next couple of weeks. As of tonight, a draft plan has been presented to the regulators, which is also available to the RAB for review. It is anticipated that the full-scale system will be up and running by the summer of 1999. (Mr. Mach's presentation time was cut short due to schedule delays and will be presented in more detail at the April RAB meeting.)

### ***Public Comments***

Ms. Hunter questions Mr. Cheng, as to LNAPLs being located on Site 9. Mr. Abassi responded that they have located hot wells that are contaminated with LNAPLs. During the removal action, the wells were monitored and there was no reduction in the concentration. The sampling confirmed LNAPLs. It has been determined that there is a large area containing LNAPLs.

Ms. Hunter is concerned with the sea level rising over the course-of-time, and, how the higher sea levels and erosion will impact the contaminated areas in the future. Mr. Abassi stated that this issue will be addressed.

Due to a lack of time, additional questions could not be asked. The question and answer period for these presentations will be continued at the April RAB meeting.

### ***Agenda Items For Next Meeting***

Continue Site 9 discussions and questions and answers.

### ***Upcoming Meetings***

As agreed by the RAB, the April 15, 1999 meeting has been rescheduled to meet on April 21, 1999.

Thursday, April 21, 1999

Thursday, May 20, 1999

Wednesday, June 16, 1999

Wednesday, August 11, 1999

Thursday, September 16, 1999

Thursday, October 21, 1999

Thursday, November 18, 1999

### ***Meeting Adjourned***

Ms. Fargo concludes the meeting, and the meeting adjourned at 8:50 p.m.

Note: The Coronado Library requests that the meeting end no later than 8:30 p.m., however, they would schedule an earlier time to allow the RAB members additional time if needed.

